

ACROSS THE AMERICAS: KENTUCKY'S ECOLOGICAL LINK TO LATIN AMERICA

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Although Kentucky is separated from Latin America by a distance of nearly one thousand miles to several thousand miles, there are numerous connections between these two geographies. Since the early 1990s there has been a continual rise in the number of Latinos living and working in Kentucky, an influx that has resulted in a changing cultural landscape. These two geographies are connected by much more than people, however. The human migration between these areas is a more recent phenomenon, whereas ecological connections have existed for tens of thousands of years.

Both Kentucky and Latin America have rich and unique biodiversity (the variety of life and its interactions). Kentucky is located in one of the most ecologically diverse regions in the United States. The region has high numbers of freshwater and terrestrial species, is home to numerous endemic species (plants and animals that only occur naturally in a specific and limited area) and contains a wide variety of natural communities (habitats) from mountains to broad wetlands plains. Latin America's ecological uniqueness is unparalleled around the world. The biologically rich upland and lowland rainforests, high elevation mountain and desert ecosystems, diverse subtropical conifer forests, numerous endemic species and high plant and animal species richness make Latin America globally significant. These regions share more than individual ecological uniqueness; they are connected by species migration patterns, shared species and similar habitats in an interconnected transcontinental landscape that is critical to the survival of numerous species.

A number of plant and animal species are found in both Kentucky and Latin America. A few plants that are endangered in Kentucky are common in tropical Latin America; most of these are tropical aquatic species like Blue Mud-plantain and Burhead. These Kentucky populations are at the northern edge of their distribution and trying to adapt to cooler conditions that are less ideal than in their southern habitats. The Mississippi River serves as a northern conduit for the distribution of plants from the tropics. Water birds play a role in panding plant species ranges; they are well known for moving plants from swamp to swamp.

Several kinds of fishes and mussels also are found both in Kentucky and Latin America. The Alligator Gar, Striped Mullet and Giant Floater are a few of the aquatic animals known from both regions. Alligator Gar live in pools and backwaters of large rivers, swamps and lakes from Costa Rica north to the Ohio River valley and Kentucky; diners in Mexico may know this species as the popular dish Rico Catán. Normally found in coastal areas nearly worldwide, the Striped Mullet swims up the Mississippi River to Kentucky during droughts. The Giant Floater is a freshwater mussel found in swamps, ponds and large rivers from the northern United States south into Mexico.

Although most of Latin America is tropical to sub-tropical, there are areas in the highlands and mountains that have a climate similar to Kentucky. In some of these areas, specifically the highlands of Mexico and Guatemala, there are forests very similar to those of eastern Kentucky. These forests are Temperate Deciduous Mesophytic Forest, a type of forest considered to be the most biologically diverse temperate forest in the world. Although thousands of miles apart, these temperate forests share a number of plant species including trees such as White Pine, Black Cherry, Sweetgum, Flowering Dogwood and Redbud.

One of the most significant and direct connections between Kentucky and Latin America is the yearly migration of butterflies and birds between the two regions. The most significant butterfly migration is that of the Monarch. Monarch butterflies breed in North America and each year millions of them migrate over a thousand miles to overwinter primarily in one small region of southern Mexico. Bird migration between these two regions is represented by Neotropical migrants, birds that breed in North America and spend the nonbreeding season in Mexico, the Caribbean and Central and South America. Each year Neotropical migrants such as Cerulean Warblers, Indigo Buntings, Scarlet Tanagers, Baltimore Orioles and Wood Thrushes come to Kentucky to nest and breed, and then return to Latin American countries for the nonbreeding season. Millions of Neotropical migrants make the yearly journey traveling thousands of miles during the flight; some species travel as far south as the Andes. These birds typically migrate as individuals and fly during the night.



Blue Mud-plantain ~ Margaret Rhinehart, TN Native Plant Society



Alligator Gar ~ Duane Raver from USFWS Digital Library System



Monarch ~ L.D. Gibson



All species depend on good quality natural habitat where they live and along their migratory paths. Species habitat and migration corridors are under increasing pressure from human population growth throughout the transcontinental landscape between Kentucky and Latin America. Habitat fragmentation and degradation are occurring at unprecedented rates. Land conversion (forest clearing, wetland draining, etc.), resource extraction (logging, surface mining, etc.), land use practices (agricultural applications of fertilizers and pesticides, dams, etc.) and urbanization (urban sprawl, road building, power line corridors, etc.) have dramatically altered the landscape and imperiled countless species. Fragmented and degraded landscapes result in limited habitat for native species. As the natural landscape is degraded it begins to lack the ability to perform ecological processes, tends to increase the spread of invasive species (species that occur outside their natural range) and results in diminished ecosystem services (drinking water, clean air, medicinal extracts, etc.).

There are a number of conservation-based organizations working across the Americas to protect irreplaceable endangered plants, animals

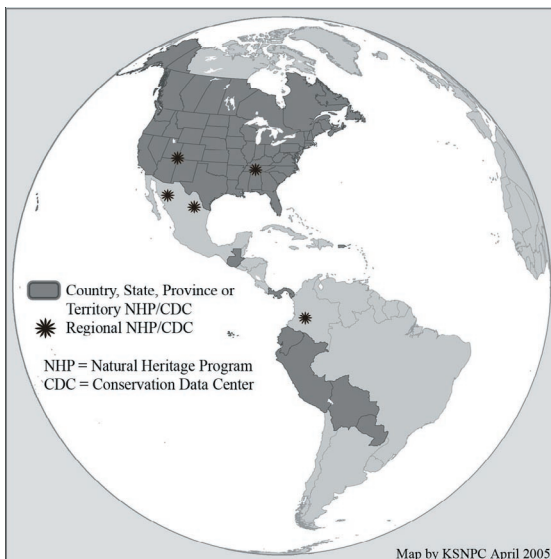
and ecosystems throughout the region. One of the largest networks is the international natural heritage network headed by NatureServe.

This network includes Natural Heritage Programs and Conservation Data Centers across Canada, the United States and Latin America, all contributing data to the same conservation database. The Nature Conservancy and the World Wildlife Fund are two of the larger international not-for-profit organizations spearheading land conservation, research and coordination of resources for conservation activities across the Americas. Additionally, organizations such as Pronatura (Mexico), Defensores de la Naturaleza (Guatemala) and Pro-Naturaleza (Peru) make significant regional contributions. Although these organizations play a significant role, conservation efforts must involve local individuals, communities and organizations to conserve biological and ecological riches shared by all throughout the region.



Satellite Data © NASA - Visible Earth 2004

Public awareness, understanding and support of our shared natural heritage is essential to maintaining the rich biodiversity of this interconnected transcontinental landscape. To learn more about rare species and natural communities, conservation efforts and the Natural Heritage Network visit the following Web sites:



SPECIES AND COMMUNITY INFORMATION:

- KSNPC Species and Community Info - www.naturepreserves.ky.gov/inforesources/SpeciesCommunityInfo.htm
- USFWS Endangered Species Program - <http://endangered.fws.gov>
- NatureServe Explorer - www.natureserve.org/explorer
- InfoNatura - www.natureserve.org/infonatura

INTERNATIONAL CONSERVATION ORGANIZATIONS:

- NatureServe - www.natureserve.org
www.natureserve.org/espanol/index.jsp
- Natural Heritage Network - www.natureserve.org/visitLocal/index.jsp
- The Nature Conservancy - www.nature.org
- World Wildlife Fund International - www.panda.org
- Partners in Flight - www.partnersinflight.org
- Society for Conservation Biology - www.conbio.org
- Conservation International - www.conservation.org



Wood Thrush ~ Steve Maslowski, USFWS

This article was published in a three part series in La Voz, a regional bilingual Spanish-English newspaper. The translated pages along with photos and maps are on our Web site:

www.naturepreserves.ky.gov/inforesources/LAconnection.htm

LA VOZ
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